

**UUC Rate Case Info**  
**System Improvements**

**Briarcreek Wastewater System**

- Engineering work, plan submittal, DHEC Construction Permit for the installation of sludge holding tanks at WWTPs #1 & #2
- Installation of new sampler equipment for WWTP #1.
- Installation of RPZ Backflow Prevention Devices on the water services at the WWTPs for protection of the water system
- Upgrades of Electrical Controls
  - Replaced motor starter for blower(8-06)
  - Replaced motor starter for blower(3-07)
  - Replaced Phase monitor
- Upgrades of Treatment Equipment/Facilities
  - Replaced 3GPD Chemical Feed pump
  - Replaced 15 GPD Chemical Feed Pump
  - Replaced Blower units
  - Replace bearings in blower
  - Replaced aeration piping for more efficient WWTP operation
  - Installed new flow meter for measuring effluent discharge from WWTP as required by NPDES permit.
- Installation of Elder valves within the collection system
- Installation of new blower motor (7/09)
- Installation of RPZ Backflow Prevention Device on the water service at the WWTP for protection of the water system
- Installation of pedestal mounted emergency eyewash station for safety as required by OSHA

**Canterbury Wastewater System**

- Engineering work, plan submittal, DHEC Construction Permit for the installation of metal scavenger treatment at WWTP
- Purchase and installation of chemical feed equipment for metals scavenger treatment
- Installation of Elder valves within the collection system
- Replaced section of sewer main
- Upgrades to existing WWTP to improve wastewater treatment to meet NPDES Permit limits
  - Installation of new clarifier unit
  - Installation of new chlorine contact chamber for disinfection
  - Installed new bar screen and air-lift pump to remove debris entering WWTP
  - Installation of additional blowers / upgraded aeration equipment

- Replaced coarse bubble aeration diffusers with fine-bubble Wifley Weber diffusers for increased oxygen transfer efficiencies and treatment and better effluent quality at the WWTP
  - Replaced support pier for influent sewer main entering WWTP
  - Installation of new fencing to enclose additions to WWTP.
  - Replaced existing blower motors and wired in cooling fans in blower housing units
  - Replaced blower unit and motor on original section of WWTP
- Installed stone on access road and at WWTP for all weather access as required by SCDHEC
- Installed emergency eyewash station at WWTP for chemical safety as required by OSHA
- Installation of RPZ Backflow Prevention Device on the water service at the WWTP for protection of the water system
- Installation of flow-proportional chemical feed pumps for disinfection/dechlorination at the WWTP

#### **Chambert Forest Wastewater System**

- Installation of Elder valves within the collection system
- Installation of sewer service lines to provide service to several customers
- Replaced sewer service at 202 Helen Drive
- Conversion of WWTP #1 to a pump station with new electrical controls and pumps to divert flow to the #2 WWTP
- Installation of force main from new lift station (Old WWTP#1) to upgraded WWTP #2
- Upgrades to existing WWTP #2 to improve wastewater treatment to meet NPDES permit limits.
  - Installation of new clarifier units
  - Install new aeration basins
  - Installation of new blower units and motors
  - Upgrades to electrical service and controls
  - Installation of aerobic digester
- New Fence to enclose upgraded WWTP for proper security
- Engineering work, plan submittal, DHEC Construction Permit for the installation of metal scavenger treatment at WWTP
- Installation of chemical feed equipment for Metals scavenger including secondary containment for chemical feed tanks to meet NPDES Permit limits
- Installation of RPZ Backflow Prevention Device on the water service at the upgraded WWTP, along with the converted WWTP/Lift Station for protection of the water system
- Installation of flow-proportional chemical feed equipment for disinfection/dechlorination at the WWTP

- Performed I/I study and identified/repared various points within the collection system to reduce possible sources of inflow/infiltration

### **Fairwood Wastewater System**

- Installed new check valve on Blower at WWTP
- Upgrades made to the clarifier at the WWTP including new drive chain and new wipers on sweep arms to provide better efficiencies of the settling process
- Installation of new blower motor(1-06) and newer blower(3-06) at WWTP
- Installation of Elder valves within the collection system
- Installation of new flow meter at the WWTP, including power supply and cables for connecting to flow proportional, composite effluent sampler
- Repaint handrails and walkways at WWTP to extend service life of facilities
- Replaced motor switch on blower(1-07)
- Replaced motor starter on blower (7/07)
- Replaced gearbox and gears on clarifier drive unit
- Installation of RPZ Backflow Prevention Device on the water service at the WWTP for protection of the water system
- Installation of new blower motor and electrical controls at the WWTP (1/08)
- Installation of new blower motor, motor starter and belts for 10 hp unit (12/09)

### **Highland Forest Wastewater System**

- Installation of Elder valves within the collection system
- Engineering work, plan submittal and receipt of a DHEC Construction Permit for the installation of metal scavenger treatment at WWTP
- Sitework completed for the installation of building for metal scavenger treatment at WWTP
- Installed chemical feed Equipment for Metals scavenger including secondary containment for chemical feed tanks
- Replaced aerator in polishing pond at WWTP for maintaining proper DO levels in the effluent
- Replaced utility owned sections of several service lines to provide sewer service to customers
- Engineering work, plan submittal, DHEC Construction Permit for the installation of sludge thickening tank/digester at the WWTP
- Rebuilt section of earthen dike surrounding the final effluent polishing pond at WWTP to prevent wastewater from being discharged into receiving waters
- Install new water lines at WWTP for proper operation of chemical feed equipment
- Install new electrical wiring and conduit to chemical treatment building at WWTP
- Replaced section of sewer collection main in subdivision

- Install new Flow-Proportional, Composite sampler at the WWTP
- Upgrades to the access road into the WWTP for proper access to facilities and allow access by heavy equipment (sludge trucks, etc.)
- Various upgrades to the electrical controls and equipment at the WWTP
  - Installed service to the Metals treatment equipment and chemical feed building
  - Aeration/Blower controls
  - Clarifier drive unit
- Installed decant pump equipment for digester
- Replaced clarifier drive gear reducer and motor
- Installation of RPZ Backflow Prevention Device on the water service at the WWTP for protection of the water system
- Install new motor and starter for clarifier drive unit and install new drive gears on the gearbox with electrical limit switch controls

#### **Kingswood Water System**

- Bored under roadway and tapped main and installed new water service including meter and meter box to provide service to customer
- Work done to the exterior of the treatment building to extend the life of the asset
- Replaced/upgraded sections of piping and valves within the wellhouse
- Installed flow control switch for safety purposes on the chemical feed equipment to prevent overfeeding in the event of a well pump failure
- Installed new air compressor in the wellhouse for properly controlling and maintaining air/water levels within the hydropneumatic tank

#### **North Greenville College/Cherokee Valley Wastewater System**

- Replaced main circuit board in WWTP Remote Alarm System.
- Installation of Elder valves within the collection system
- Replaced exhaust fan in the chemical feed area for safety
- Relocated chlorine disinfection feed location for improved wastewater treatment, included repiping chemical feed line and installation of new chemical feed pump
- Installed new decant pump in digester at WWTP
- Installed new 7 gpd chemical feed pump at WWTP
- Engineering services and preparation of a PER for submittal to DHEC including analysis of the WWTP and future upgrades and expansion of the facilities required to ensure adequate sewer capacity
- Installed new pumps in the SBR units at the WWTP
- Installed new Mission RTU controls and alarms at the WWTP

- Modifications made to the aeration blower equipment and housing, including the installation of a new blower unit
- Replaced check valve on small digester blower unit
- Replaced float switches and contactors which control levels in the SBR units of the WWTP

#### **River Forest Wastewater System**

- Installation of Elder valves within the collection system
- Installation of new sewer service line to serve customer
- Replacement of 220 ft. of sewer main to ensure proper service to customers (4/09)
- Installed 2 new lateral taps to provide service to customers

#### **Stonecreek Wastewater System**

- Installation of Elder valves within the collection system

#### **The Village Wastewater System**

- Installation of Elder valves within the collection system
- Installed rebuilt motor and pump at sewer lift station(2/06)
- Installed new pump and motor at sewer lift station (3/06)
- Installed new manhole ring and lid to prevent inflow and debris from entering wastewater collection system
- Replaced 30' foot section of utility owned service lateral to provide sewer service to customer, included road cuts and repaving.
- Replacement of manhole cover at 205 Peppertree
- Excavate and replace approx. 600 ft. of 8" sewer main, including repairs to (2) manholes to prevent I/I and ensure proper flows through the collection system to prevent sewer backups

#### **Trollingwood Wastewater System**

- Replaced existing wood post and wire fencing with 1,000 feet of chain link fencing with 3 strands of barbed wire for security at WWTP.
- General repairs to WWTP chemical feed building including new baseboard, new floor with floor drain, and threshold to extend service life of the building.
- Installed new chemical fed pump at WWTP for chlorine disinfection of wastewater.
- Installed new electrical control panel for proper operations at the WWTP and safety
- Upgrades to lift station including new pumps, piping, check valves and locking hatch for improved operation, safety and security
- Replaced aerator unit and motor at the WWTP

- Installation of RPZ Backflow Prevention Device on the water service at the WWTP for protection of the water system
- Replaced section of sewer main on Greybridge Drive
- Installation of (2) new manholes to tie-in for Phase II of the development to provide sewer service to customers

#### **Trollingwood Water System**

- Replaced air compressor at well house.
- Replaced sump pump used to pump backwash from filter equipment to the sewer system.
- Installed flow control switch for safety purposes on the chemical feed equipment to prevent overfeeding in the event of a well pump failure
- Replaced both well pumps and drop piping for wells to provide water service to customers (2/09)
- Upgrades to piping for Filter #1 and replumbed
- Replaced roof over generator shed to protect the emergency generator equipment
- Installation of flow controller on chemical feed equipment to prevent overfeeding if well pump fails

#### **Valleybrook Wastewater System**

- Installed new motor and aerator in WWTP oxidation ditch(1-06)
- Engineering work, plan submittal and receipt of DHEC Construction Permit for the installation of metal scavenger treatment at WWTP
- Excavate area, poured concrete slab and construct building for storage of chemicals for metals scavenger equipment.
- Installed electrical service for chemical feed building
- Installed chemical feed equipment for Metals scavenger including secondary containment for chemical feed tanks
- Installation of Elder valves within the collection system
- Installed new water supply lines to the chemical feed building at WWTP
- Installation of pedestal mounted emergency eyewash station for safety as required by OSHA
- Purchased and installed two 10hp aerators for improved wastewater treatment(3-06)
- Installed cover for blower at WWTP and safety
- Replaced aerator motor (4-06)
- Installation of RPZ Backflow Prevention Device on the water service at the WWTP for protection of the water system
- Installed bracket for mounting controls for adjusting the water levels within the WWTP basin
- Installation of new 10 hp motor on aerator unit #2 at the WWTP

- Replacement of aerator motor at WWTP (6/09)
- Upgrades to electrical controls and rewired various electrical boxes at the WWTP (10/09)
- Landscape and raise top of oxidation ditch at the WWTP to prevent stormwater inflow at the WWTP site

**Woodmont Estates Water System**

- Replaced gate valve at blow-off to prevent water loss and allow for proper flushing of the distribution system
- Replacement water meter for customer
- Installed new Pressure Relief Valve on the hydropneumatic tank for safety

**Woodmont High School Wastewater System**

- Legal consulting fees, provide sewer service for Greenville School District expansion

**Common UUC Cost Center**

- Purchase of 2 DO Meters and Probes for process control testing at various UUC WWTPs
- Purchase of 2 pH Test Meters for process control testing at various UUC WWTPs and water systems
- Purchase of 2 pH/mV/Temp meter devices for process control testing at various UUC water and wastewater facilities
- Located and raised manhole and regouted around rings from manhole
- Purchase of various chemical feed pumps (2 – 7gpd pumps), (1 – 15gpd feed pump), (1 - 48gpd feed pump) for use at various facilities. (6/09 and 9/09 and 10/09 and 12/09)

**Bio-Tech Charges**

Customer	Sludge	E/I	Location	ST	Price per Gallon
Canterbury	Sludge	INT	3334 West Georgia Rd., Piedmont, SC 29673	SC	0.1600
North Greenville College	Sludge	INT	Bitterend Rd., Travelers Rest, SC 29690	SC	0.1600
Valleybrook	Sludge	INT	309 Pinevalley Rd., Piedmonth, SC 29673	SC	0.1600
Chambert Forest	Sludge	INT	400 Christopher Dr., Anderson, SC 29626	SC	0.1600
Briar Creek 1	Sludge	INT	331 Killion Dr., Gaffney, SC 29340	SC	0.1600
Briar Creek 2	Sludge	INT	521 Killion Dr., Gaffney, SC 29340	SC	0.1600
Highland Forest	Sludge	INT	419 S. Highland Forest Dr., Greenwood, Sc 29646	SC	0.1600
Fairwood	Sludge	INT	298 Pineland Ave., Union, SC 29379	SC	0.1600



United Utility Companies, Inc. Facilities	BU No#	P&S	L & L Environmental Services, LLC	American Waste	Higdon's	Disposal Site Only C.W. Degler (extra cost to transport)
Gaffney Area Operations						
Briarcreek			\$0.12 / gallon			
			\$120 per 1000 gallons			
Greenville Area Operations						
Valleybrook	403112			\$0.20 / gallon		
Canterbury	403107			\$0.20 / gallon		
				\$200 per 1000 gallons		
North Greenville	403114			\$0.20 / gallon		
				\$200 per 1000 gallons		
Chambert Forest	403108			\$0.20 / gallon		
				\$200 per 1000 gallons		
Highland Forest	403115				\$0.11 / gallon	
					\$110 per 1000 gallons	
					take to (Ware Shoals)	
Fairwood	403109	Vac trk @ 3k = 32.7 ¢/gallon				
		Tanker @ 6k = 30.3¢ /gallon				\$0.09/gallon (Disposal only)